## DEPARTMENT OF COMMERCE

## BUREAU OF STANDARDS

S. W. STRATTON, Director

## INDEX TO PARTS 1, 2, AND 3 OF CIRCULAR NO. 54, "THE NATIONAL ELECTRICAL SAFETY CODE, SECOND EDITION"

Rules 100 to 185, inclusive, are for stations.

Rules 200 to 299, inclusive, are for lines, including complete segregated specifications for crossings, conflicts and common use of poles.

Rules 300 to 393, inclusive, are for utilization.

Rules 400 to 585, inclusive, in part 4, are not indexed because of the general brevity of these rules and the simplicity of their arrangement, and because of the fact that rules pertaining to any one subject are grouped together and should be considered collectively. Thus an index would simply resolve itself into an alphabetical list of section titles, which are now readily referred to in the table of contents, pages 267 to 270, inclusive.

Rule No.
Abandoned lines
Additions, application of the rules to
Alive or live
Alternative methods of construction, general
for signal lines not for public use
Aluminum conductors 221a, c, 280k, 281d
Anchors. See Guys.
Application of rules 91, 101, 201, 301
Arc welders
Arcing in hazardous locations 123, 307
Arcing or moving parts, protection from
Authorization, entrance into inclosures
Authorized or qualified Def. 20
Automatic Def. 15
Automatic cut-outs
<b>B</b> arriers, where required
Belts, guarding
Branch connections. 255
Bridges, clearances of conductors from
conductors crossing under
Buckarms, obstruction to working space
Buildings, attachments to and clearances from
13760°—17——1

Rule No.
Cables, messenger
metal sheathed
portable
separation from other conductors
Cars, cranes, and elevators
Ceilings, inclosing walls and 104
Circuit. Def. 7
Circuit breaker. See Cut-out.
Clearances (see also Separation and working space) of conductors, from bridges. 248 from buildings. 247
from buildings
from poles
on any one pole line
vertical and lateral.
of ground wires from other conductors and supports 246e
of lamps
of poles:
from hydrants and signal pedestals
from rails.
of switches, automatic cut-outs, lightning arresters and transformer con-
nections
Climbing space on poles (see also Working space) 246a, 249, 253a, Def. 39
Common use of poles, by different supply lines of all voltages 243h, 279
by supply lines of all voltages and signal lines
grades of construction required for cases of
Concrete poles
Conductors
contact, attached to bridges
classification212b, 277
clearances for (see also Clearances)
general construction requirements276
indoors
trough248d
fastenings
fire-alarm lines
for cars, cranes and elevators
for signal lines over railways221e, 280, 281d, e
for signal lines over contact conductors
for stations
for utilization
identification of
lateral
line
loading on
tables 22, 23, 24 App. A and B
location, underground         296           materials, for overhead lines         221, 280k, 281d
minimum sizes, for overhead lines 221, 273b, 28ok, l, 281d, e, 282a, 288a
properties
protection
sags
stress
tables of

	e No.
Conductors, taking up slack in	223
tension in	
twisted pair	
underground	
vertical	1. 34
See also Clearances.	
Conduit De	-
	38 <b>ob</b>
	207b
grounding or isolating service	318
•	314b
in stations	
on poles	, f, g
underground—	
installation	295
location and accessibility	290
Conflicting or in conflict De	
Conflicts (see also Common use), grades of construction required for all cases	
	-219
	270a
signal lines with supply lines of all voltages.	284
supply lines of all voltages with signal lines	285
Connectors, for signs	365
portable devices, cables and	-374
Constant current lines, classification	278
Control of cars, cranes and elevators	, 383
motors and converters	340
signs	364
Controllers (see also Switches)	-327
Copper for conductors	221
properties	223
table of	p. A
Coverings, acid-resistive	135
Cranes, cars and elevators	-384
Crossarms, for signal lines at crossings	281c
installation	231e
loads on	232
materials and minimum dimensions	281c
strength requirements	233b
Crossings, clearances of conductors at	240
grades of construction required for all kinds	-219
signal lines over railways 280	, 281
signal lines over supply lines of all voltages	, 283
signal lines over trolley contact conductors	282
special short span	269
supply lines of all voltages over railways	-267
supply lines of all voltages under railways	260
supply lines of all voltages over signal lines	, 269
supply lines of all voltages over supply lines	274a
supply lines over trolley contact conductors	
Current-carrying part De	
Cut-outs and fuses	

	Rule No.
<b>D</b> ead	Def. 13
Dead-ending conductors	233b, 266, 274b
Defective equipment	
Defective lines	204
Deteriorating agencies, protecting against	125, 342
Disconnectors	160-169, 181, 323, Def.18
Discussions of the rules	Pages 26, 55, 182, 247, 306
Ducts	Def. 42
grading of	
material, sizes and finish	294
	· ·
Electrical supply equipment	Def. 1
lines	Def. 3
station	Def 2
Elevation as a means of isolation	
Elevators, cars, cranes and	
Equipment, defective	300-304
electrical supply	
installation of, on poles	
installation of, on poles	253
in stations	112, 140–143, 172
utilization	Det. 5
Examination of materials and devices	
Exciters, installation, protection, and classification	
Exemptions to the rules	101, 201, 301
Existing installations, application of the rules to	
Exits	
Explosion proof	
Exposed	
Extensions, application of the rules to	101, 201, 301
Feeders, railway	
Fire-alarm lines	
Fire-fighting appliances	
Fixtures and signs, lighting	
Flexible supports	
Floors, floor openings, passageways and stairs	
for storage-battery rooms	
insulating. See Mats.	
Foundations for line supports	
11	234a, 235a
Furnaces and welders	234a, 235a
Furnaces and welders	350-352
Furnaces and welders	350-352
Furnaces and welders	
Furnaces and welders	350–352 
Furnaces and welders  Fuses and other cut-outs  Grades of construction required for given conditions (a conflicts) 210a, 211  Ground resistance	350–352 
Furnaces and welders  Fuses and other cut-outs  Grades of construction required for given conditions (a conflicts) 210a, 211  Ground resistance  Ground wires, arrangement of, on poles	350–352 
Furnaces and welders  Fuses and other cut-outs  Grades of construction required for given conditions (a conflicts) 210a, 211  Ground resistance	350–352 
Furnaces and welders  Fuses and other cut-outs  Grades of construction required for given conditions (a conflicts) 210a, 211  Ground resistance  Ground wires, arrangement of, on poles	350–352 
Furnaces and welders.  Fuses and other cut-outs.  Grades of construction required for given conditions (a conflicts). 210a, 211  Ground resistance.  Ground wires, arrangement of, on poles. minimum sizes.  Grounded.  Grounded permanently.	350–352
Furnaces and welders  Fuses and other cut-outs  Grades of construction required for given conditions (a conflicts) 210a, 211  Ground resistance  Ground wires, arrangement of, on poles  minimum sizes  Grounded	350–352
Furnaces and welders.  Fuses and other cut-outs.  Grades of construction required for given conditions (a conflicts). 210a, 211  Ground resistance.  Ground wires, arrangement of, on poles. minimum sizes.  Grounded.  Grounded permanently.	350–352
Furnaces and welders.  Fuses and other cut-outs.  Grades of construction required for given conditions (a conflicts). 210a, 211  Ground resistance.  Ground wires, arrangement of, on poles. minimum sizes.  Grounded.  Grounded permanently.  Grounded system.	350–352

5

	Rule No.
Grounding, guy wires	
in hazardous locations123b,	125b, 307c, 342b
instrument cases	176f
method of, general	90 to 97
for lightning arresters, circuits and equipment	2078, 3048
for utilization equipment	
in stations	
motor frames	
noncurrent-carrying metal parts, general 113b, 168, 20	0.0
of cars, cranes and elevators	
	0
of furnaces and welders	0.0
of lighting fixtures and signs	
of lightning arresters	ů.
of protable devices	0,
of rotating equipment	•
of signal equipment	
service conduit	318
sheathing	
switch and cut-out cases	168, 326
switchboard frames	175, 334
transformer cases	
Guardarms	240h, 260
Guarded	.,,,
Guarding, arcing or suddenly moving parts 123a, 161, 16	
conductors	247d P 212-214
control circuits.	
guy wires.	
lamps in series circuits	
live parts, general	
in hazardous locations 123a, 125,	
in storage-battery rooms	
near the ground	
of cars, cranes and elevators	
of furnaces and welders	352
of lighting fixtures	362
of lightning arresters	184
of motors	343a, b, c
of signs	363b
of switchboards	
of switches and cut-outs	122d, 160, 327
underground	
manhole openings	
motors in hazardous locations	
moving parts, general	
of cars, cranes, and elevators.	
of circuit breakers	
of motors	_
noncurrent-carrying metal parts	3
pole equipment	
poles, from fires and abrasion	
to prevent climbing	
signal apparatus	
temporary wiring	156
13760°—17——2	

Rule No	).
Guys, general requirements25	
for signal lines over railways	
for special transverse strength	6
guards	2Ì
insulators	2
Handhole Def. 4	.5
Hazardous locations, classification	
conductors in	4
motors in	I
portable conductors and lamps in	c
sparing or arcing parts in	7
switches or cut-outs in	I
transformers in	.2
Hazards, conditions of	a
Ice loading. See Loading.	
Identification of, conductors	3
equipment	
poles	
Illumination, cars and subways	4
general10	
storage-battery rooms	-
switchboards	
Inclosed	
Inclosing sparking or arcing parts	I
Induced voltage, protection against	
Inductance and eddy currents, precautions to avoid	- 5
Inflammable flyings and gas 123, 161, 307, 314b, 321, 34	
Inspection	23
Instruments, grounding cases of	
Insulated Def. 2	5
Insulating Def. 2	
covering for live parts	6
handles and shields for switches	b
mats and platforms. See Mats.	
noncurrent-carrying metal parts	d
Insulation, for lighting fixtures	
for portable devices	0
for series lamp supports	С
Insulators, for guy and span wires and lamp supports	;2
for signal lines at crossings	j
pins 231c, d, 233b, 266a, 286	oi
specifications	b
Isolated Def. 2	
Isolating, conductors	a
lamps in series circuits	6
live parts; general	ю
by elevation	d
by inclosure	I
moving parts	7
service conduit	8
storage batteries	0
Isolation by elevation	3

Joint use of poles. See Common use of poles.	Rule No.
Joints, taping ends and	. 157, 317
Lamps, guarding or isolating	
insulators in suspension chains	252h, 366
on poles	
safe access to arc	
wiring	
Lateral conductors	
Lateral working space	
Levels, relative, determining grade of construction	214-219
effect on climbing space	. 249c, d
governed by voltage classification	210b
previously established	. 243g, h
recommended	240b
standardization of	270b
Lighting, cars and subways	•
fixtures and signs	
stations	
storage-battery rooms	-
Lightning arresters, general	
for utilization 304a,	
on poles	
Lightning protection wires.	
Line conductor	
Line supports. See Poles.	. Det. 30
Lines, electrical supply	Def a
open	
Live or alive.	
Loading, map of the United States	
on conductors	
tables of resultant	
tables of resultante Table 2 tables of transverse Table 2	
tables of vertical	
on line supports	
Longitudinal strength, special	
Longitudinal stress in conductors	10, 280a-0
Manholes	TO C
Manual	
Map, loading, for the United States End	
Mats, floors, and platforms, insulating (where required)	
122a, 124b, 153e, 169c, 176b, 306b, 313c, 327c, 3	
Meter loops, protection of	311
Motors and motor-driven machinery	
Motors, speed control of	120
Moving parts, guarding. See Guarding.	
No. of The Asian I (Care) Challe	1. 1
National Electrical (fire) Code	
New installations, application of the rules to	3010
Outdoor stations	1020

Rule N
Panelboards 330-335, Def. 5
Pendant and portable conductors
Permanently groundedDef. 1
Pins, insulator, general requirements
for signal lines at crossings
Platforms, insulating. See Mats.
Pole face Def. 3
Poles and towers, calculation of size, for given load
carrying capacity
calculation
tables
clearances from hydrants and signal pedestals
clearances from rails
deterioration
grounding205
guarding of, from abrasion and fires
guying235
hardware232
identification
loading on 230, 232, 286a, App. 1
minimum requirements
obstructions on
protective covering for
reinforcement
resisting moments
table of
stepping
strength
wiring on
Portable devices, cables, and connectors
Position of conductors. See Levels, relative.
Prime movers, speed control of
Protection by warning signs248
for ground wires 240
of conductors 150, 151, 307, 310, 311, 344, 350, 36
of longitudinal runs249
of signal lines
of underground live parts
of vertical conductors
of wood poles
special for conductors
Pulleys, guarding of12
Qualified or authorized Def. 2
•
Railway feeders (see also Conductor, contact)
Railways, crossings with. See Crossings.
Reconstruction
Reconstruction, application of rules to
Repairs, general30
Rotating equipment120–12
Rural district Def. 4

Rule No.
Sag, apparent at any point
apparent, of a span Def. 36
normal
Sags, for service leads
of fire-alarm lines
of signal lines
recommended normal
tables 280m, Tables 12, 13, 14 App. A
Scope of rules
Separation of conductors (see also Clearances) on any one pole line 241 to 244
on bridges 248e
of pole lines to avoid conflict
Separation of live parts on switchboards
Service Def. 32
Service leads, cabled
conductors for
grades of construction for
installation
sags
Short-span crossing construction. 269
Signal apparatus
Signal lines (see also Grades). Def. 4
classification
crossing over important railways
crossing over trolley contact conductors
crossing over unimportant railways
crossing supply lines
in conflict with supply lines
not for public use
on commonly used poles with supply lines
which have taken on the character of supply lines
Signs and lighting fixtures
Signs, warning
Space, climbing
lateral working
Span wires, insulating and mechanical guards (see also Guys) 252, 276f
Speed-control and stopping devices
Splices and taps
Stairs, headroom and handrails 105b, c
Steel towers and poles, strength (see also Poles)
Storage batteries
Strength, conductors. See Conductors.
construction at crossings
crossarms, pins and conductor fastenings
steel poles and towers
wood and concrete poles
requirements for guys
requirements for line supports.
Stresses, allowable in steel
allowable in wood poles. 235, App. B-1b
tables of, in conductors
шлев от, in conduction табие 16, 19, 20 App. A

	to a		Rule No.
Substantial			Def. 19
Subway and car lighting	.,		. 384
Supply equipment, electrical			Def. 1
lines, electrical			Def. 3
station, electrical			
Supply lines (see also Grades), arrangement in general			
clearances for			. 275
crossing under railways			. 260
crossing over railways			
crossing over signal lines			268, 260
in conflict with signal lines			284. 285
in rural districts			
in urban districts			
over trolley contact conductors	• • • • • • • • •		. 271
special strength requirements			: 2/3
Switchboard			Dof ==
Switchboards and panelboards		6	Del. 51
Switches			
arrangement			
character and manipulation			
on poles			
where required			
Switches and cut-outs, general	160-	169, 31 <b>0</b> b, c,	320-327
for cars, cranes and elevators			
for outdoor signs		<b></b>	. 364
Tags			
Taping ends and joints			157, 317
Telephone and other signal apparatus			390-393
Temporary installations, application of the rules to		101C, 21	oc, 301c
Temporary wiring		156,	319, 322
Tensions in conductors, tables			
Tests of materials and devices			
Towers. See Poles.			1, 0
Transformer vault			Def. 46
Transformers, general			
for utilization			
on poles			
Transverse, loads on lines.			
table of			
strength requirements			
Trees, falling			
trimming.			
Trolley feeders (see also Conductor, contact)			
fromey feeders (see also conductor, contact)		273,	270, 277
I Indonesia d lines		-6	202 225
Underground lines			
Urban districts			
Utilization equipment		· · · · · · · · · · · · ·	Der. 5
We will die of the state of the			
Ventilation of storage-battery rooms			
Vertical conductors			
Vertical separations			
Voltage or volts			Def. 6

	Rule No.
Walls and ceilings	104
Varning signs	205b, 248f
Weather map of the United States	
Velders, electric furnaces and	
Vind pressure. See Loading.	
Vire. See Conductors.	
Wire gages	. Def. 50
Viring	
defective	
infrequently used	112
temporary	6, 319, 322
Vorking space, for utilization	305
in stations	
lateral (see also Climbing space)	243, 246a
Yield point, of copper	223e, g
steel	

